

P20918.A08

AMENDMENTS TO THE CLAIMS:

Please cancel claims 10-29, 38 and 40 without prejudice or disclaimer of the subject matter recited therein. Applicant reserves the right to file the subject matter of these claims in one or more continuation applications; and

Please add new claims 55-57; and

Please amend claims 30, 33-36, 39, 41, 44, 48-51 and 53 as follows:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

Claims 1-29 (Canceled).

30. (Currently Amended) A skeletal implant of the type to be used to connect at least two elements of a skeleton, the skeletal implant comprising:

a first part adapted to be connected to at least one of the at least two elements of the skeleton;

a second part adapted to be connected to another of the at least two elements of the skeleton;

a variable volume element adapted to move the first and second parts away from with

P20918.A08

respect to each other;

a high-pressure chamber supplying fluid to the variable volume element; and

a ~~variable volume~~ low-pressure chamber receiving fluid from the variable volume element; and

a recharging variable volume element adapted to communicate with the high-pressure chamber and the low-pressure chamber.

31. (Previously Presented) The implant of claim 30, further comprising another variable volume element disposed in the high-pressure chamber.

32. (Previously Presented) The implant of claim 31, further comprising a high-pressure valve allowing fluid to enter the variable volume element from the high-pressure chamber.

33. (Currently Amended) The implant of claim 30, wherein the ~~variable volume~~ a low-pressure chamber comprises a deformable impermeable sleeve.

34. (Currently Amended) The implant of claim 33, further comprising a low-pressure valve allowing fluid to exit the variable volume element and enter the ~~variable volume~~ low-

P20918.A08

pressure chamber.

35. (Currently Amended) The implant of claim 30, further comprising a third part having one end coupled to the first part and another end ~~coupled to~~ disposed between the variable volume element and the second part.

36. (Currently Amended) The implant of claim 30, wherein the variable volume element comprises one end coupled to the first part and another end coupled to ~~the~~ a third part.

37. (Currently Amended) The implant of claim 30, further comprising a third part having a threaded opening which ~~engage~~ engages a threaded portion of the ~~first~~ second part.

Claim 38 (Canceled).

39. (Currently Amended) The implant of claim ~~38~~ 30, wherein the recharging variable volume element comprises one end that is coupled to a third part and another end that is coupled to the ~~second~~ first part.

P20918.A08

Claim 40 (Canceled).

41. (Currently Amended) The implant of claim 30 ~~39~~, wherein the ~~first~~ second part is rotatably coupled to at least one of the variable volume element and a ~~the~~ third part.

42. (Previously Presented) The implant of claim 30, further comprising a sealed bellows disposed in the high-pressure chamber.

43. (Previously Presented) The implant of claim 30, ~~further comprising~~ wherein the recharging variable volume element comprises a metal bellows having one end coupled to the ~~second~~ first part and another end coupled to a third part.

44. (Currently Amended) The implant of claim 30, further comprising a sleeve defining ~~the~~ a variable volume of the low-pressure chamber.

45. (Previously Presented) The implant of claim 30, further comprising a high-pressure conduit connecting the variable volume element to the high-pressure chamber.

P20918.A08

46. (Previously Presented) The implant of claim 30, wherein the variable volume element comprises a metal bellows.

47. (Previously Presented) The implant of claim 30, wherein at least one of the first part and the second part comprises an opening which is adapted to receive a connecting member, whereby the connecting member connects the first or second part to one of the at least two elements of the skeleton.

48. (Currently Amended) A skeletal implant of the type to be used to connect at least two elements of a skeleton, the skeletal implant comprising:

a first part adapted to be connected to at least one of the at least two elements of the skeleton;

a second part adapted to be connected to another of the at least two elements of the skeleton;

a variable volume element having a first end coupled to the first part and a second end, the variable volume element being adapted to move the first and second parts away from each other;

a third part having a first end coupled to the first part and a second end coupled to the second end of the variable volume element;

P20918.A08

a high-pressure chamber supplying fluid to the variable volume element; and
a ~~variable volume~~ low-pressure chamber receiving fluid from the variable volume element.

49. (Currently Amended) The implant of claim 48, further comprising a recharging variable volume element which includes a first end coupled to the ~~second~~ first end of the third part and a second end coupled to the ~~second~~ first part.

50. (Currently Amended) The implant of claim 49, wherein the recharging variable volume element is adapted to communicate with at least one of the high-pressure chamber and a the low-pressure chamber.

51. (Currently Amended) The implant of claim 48, wherein the ~~first~~ second part is rotatably coupled to at least one of the variable volume element and the third part.

52. (Previously Presented) The implant of claim 48, further comprising a high-pressure valve allowing fluid to enter the variable volume element from the high-pressure chamber.

P20918.A08

53. (Currently Amended) The implant of claim 48, further comprising a low-pressure ~~chamber~~ valve allowing fluid to exit the variable volume element and enter the ~~variable volume~~ low-pressure chamber.

54. (Previously Presented) The implant of claim 48, wherein at least one of the first part and the second part comprises an opening which is adapted to receive a connecting member, whereby the connecting member connects the first or second part to one of the at least two elements of the skeleton.

55. (New) A skeletal implant of the type to be used to connect at least two elements of a skeleton, said implant comprising at least two parts, each of which is capable of being connected to one of said at least two elements, said at least two parts being movable with respect to each other, wherein there is provided, between said at least two parts:

at least one of:

a means authorizing a displacement between said at least two parts, from a starting position to a displaced position; and

a means exerting a force between said at least two elements of the skeleton;

said means being responsive to control means and comprising at least one variable volume element containing a fluid;

P20918.A08

said control means comprising a high-pressure reservoir and a very high-pressure differential variable volume recharging element for sending fluid at high-pressure into said high-pressure reservoir;

said high-pressure reservoir being connected to said at least one variable volume element via a high-pressure valve;

said at least one variable volume element being connected to a low-pressure reservoir via a low-pressure valve;

said very high-pressure differential variable volume recharging element being connected to said low-pressure reservoir via another low-pressure valve; and

said very high-pressure differential variable volume recharging element being responsive to displacements of corporal parts for recharging of said high-pressure reservoir with said fluid.

56. (New) The implant of claim 55, wherein said high-pressure reservoir is designed to maintain said fluid contained therein at high pressure, even when significant quantities of said fluid are sent to said variable volume element, provoking a substantial reduction in a volume of said fluid, in order to maintain a high value of pressure in said high-pressure reservoir, and wherein said high-pressure reservoir contains an energy accumulator in the form of a cell having an elastically deformable wall, said energy accumulator being

P20918.A08

configured to assume a compressed and reduced volume state when fluid is introduced into said high-pressure reservoir, and being configured to assume an expanded state to maintain a high pressure when fluid is withdrawn from said high-pressure reservoir.

57. (New) A skeletal implant of the type to be used to connect at least two elements of a skeleton, said implant comprising at least two parts, each of which is capable of being connected to one of said at least two elements, said at least two parts being movable with respect to each other, wherein there is provided, between said at least two parts:

at least one of:

a means authorizing a displacement between said at least two parts from a starting position to a displaced position, the means comprising at least one variable volume element containing a fluid; and

a means exerting a force between said at least two elements of the skeleton;

said means being responsive to control means;

said control means comprising a high-pressure reservoir and a very high-pressure differential variable volume recharging element for sending fluid into said high-pressure reservoir;

said high-pressure reservoir being connected to said variable volume element via a high-pressure valve;

P20918.A08

said variable volume element being connected to a low-pressure reservoir via a low-pressure valve; and

said high-pressure valve and said low-pressure valve being relatively spaced apart from one another.